



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/646,242

08/22/2003

Sandip Sarkar

030244

9397

23696 7590 07/27/2007  
QUALCOMM INCORPORATED  
5775 MOREHOUSE DR.  
SAN DIEGO, CA 92121

EXAMINER

BOAKYE, ALEXANDER O

ART UNIT

PAPER NUMBER

2616

NOTIFICATION DATE

DELIVERY MODE

07/27/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com  
kascanla@qualcomm.com  
nanm@qualcomm.com

# Office Action Summary

Application No.

10/646,242

Applicant(s)

SARKAR, SANDIP

Examiner

ALEXANDER BOAKYE

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12/08/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-32, 34-46, 48 and 52-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-8, 12-14, 22-32, 34-38, 46, 48, 50 and 52 is/are allowed.
- 6) ☒ Claim(s) 1, 10, 11, 15-21, 39-45 and 55-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Objections***

1. Claims 1, 3, 4-8 are objected to because of the following informalities:

In claim 1 (line 1), "operable" is not a positive recitation.

In claim 3 (lines 1, 13), "operable", is not a positive recitation.

In claim 4 (lines 1, 13), "operable", is not a positive recitation.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1, 10-11, 15-21, 39-45, 55-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jamal (US Patent # 5,754,537) in view of Kim (6,880,103).

Regarding claim 1, Jamal teaches an apparatus, operable with a plurality of remote stations (column 10, lines 7-8) capable of transmission on a shared resource, comprising: a receiver for receiving a plurality of access requests for

Art Unit: 2616

transmission on the shared resource from a respective plurality of remote stations and for measuring the utilization of the shared resource (column 8, lines 34-39) ; a scheduler for allocating a portion of the shared resource to zero or more of the requesting remote stations in response to the plurality of access requests, the allocation comprising zero or one common access grant to a subset of the requesting remote stations and for generating a busy command in response to the measured utilization (column 14, lines 33-36; the claimed common grant channels are shared channels which are inherent in the access grant); a transmitter for transmitting the access request message and for transmitting a transmitter for transmitting the common access grant to the remaining remote stations on one or more common grant channels and for transmitting a busy signal comprising one or more busy commands (column 11, lines 32-34; column 11, lines 57-63). Jamal differs from the claimed invention in that Jamal does not disclose transmitting busy signal. However, Kim from the same field of endeavor discloses transmitting busy (column 7, lines 4-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kim into the system of Jamal in order to improve system performance.

Regarding claim 10, Jamal teaches a remote station, comprising: a data buffer for receiving data for transmission (column 10, lines 7-8); a message generator for generating an access request message when the data buffer contains data for

Art Unit: 2616

transmission (column 11, lines 51-53); a receiver for receiving one or more common grant channels from a base station (see Fig. 6); a message decoder for decoding an access grant directed to the remote station, the access grant comprising a common grant on one of the one or more common grant channels (column 14, lines 33-36; the claimed common grant channels are shared channels which are inherent in the access grant); and a transmitter for transmitting the access request message and for transmitting a portion of data from the data buffer in response to a decoded access grant, wherein the receiver further receives one or more individual grant channels from the base station (column 11, lines 32-34; column 11, lines 57-63); and the message decoder further decodes an access grant comprising an individual grant directed on one of the one or more individual grant channels (column 14, lines 33-36). Jamal differs from the claimed invention in that Jamal does not disclose receiving a busy signal from the base station. However, Kim from the same field of endeavor discloses receiving busy signal from base station (column 7, lines 4-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

incorporate the teachings of Kim into the system of Jamal in order to improve system performance.

Regarding claim 11, Jamal teaches a remote station, comprising: a data buffer for receiving data for transmission (column 10, lines 7-8); a message generator for generating an access request message when the data buffer contains data for transmission (column 11, lines 51-53); a receiver for receiving one or more common grant channels from a base station and for receiving a busy signal from the base station (see Fig. 6); a message decoder for decoding an access grant directed to the remote station, the access grant comprising a common grant on one of the one or more common grant channels (column 14, lines 33-36; the claimed common grant channels are shared channels which are inherent in the access grant); and a transmitter for transmitting the access request message and for transmitting a portion of data from the data buffer in response to a decoded access grant, wherein the transmitter further transmits a limited portion of data in the data buffer autonomously, irrespective of whether an access grant has been received (column 11, lines 32-34; column 11, lines 57-63). Jamal differs from the claimed invention in that Jamal does not disclose receiving a busy signal from the base station. However, Kim from the same field of endeavor discloses receiving busy signal from base station (column 7, lines 4-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kim into the system of Jamal in order to improve system performance.

Regarding claims 15, 16, 17, 55, 57, 58, 59, Jamal teaches a remote station, comprising: a data buffer for receiving data for transmission (column 10, lines 7-8); a message generator for generating an access request message when the data buffer contains data for transmission (column 11, lines 51-53); a receiver for receiving one or more common grant channels from a base station and for receiving a busy signal from the base station (see Fig. 6); a message decoder for decoding an access grant directed to the remote station, the access grant comprising a common grant on one of the one or more common grant channels (column 14, lines 33-36; the claimed common grant channels are shared channels which are inherent in the access grant); and a transmitter for transmitting the access request message and for transmitting a portion of data from the data buffer in response to a decoded access grant in accordance with the received busy signal, wherein the transmitter further transmits a limited portion of data in the data buffer autonomously, irrespective of whether an access grant has been received, respective to the received busy signal (column 11, lines 32-34; column 11, lines 57-63). Jamal differs from the claimed invention in that Jamal does not teach that the transmission rate is decreased in response to an assertion on the received busy signal. However, Kim from the same field of endeavor discloses that the transmission rate is decreased in response to an assertion on the received busy signal (column 7, lines 4-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kim into the system of Jamal in order to improve system performance.

Regarding claims 18, 19, 20, 21, Jamal teaches a remote station, comprising: a data buffer for receiving data for transmission (column 10, lines 7-8); a message generator for generating an access request message when the data buffer contains data for transmission (column 11, lines 51-53); a receiver for receiving one or more common grant channels from a base station and for receiving a busy signal from the base station (see Fig. 6); a message decoder for decoding an access grant directed to the remote station, the access grant comprising a common grant on one of the one or more common grant channels (column 14, lines 33-36; the claimed common grant channels are shared channels which are inherent in the access grant); and a transmitter for transmitting the access request message and for transmitting a portion of data from the data buffer in response to a decoded access grant in accordance with the received busy signal, wherein the transmitter further transmits a limited portion of data in the data buffer autonomously, irrespective of whether an access grant has been received, respective to the received busy signal (column 11, lines 32-34; column 11, lines 57-63). Jamal differs from the claimed invention in that Jamal does not teach received busy signal. However, Kim from the same field of endeavor discloses received busy signal (column 7, lines 4-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kim into the system of Jamal in order to improve system performance.

Regarding claims 39, 40, 41, 45, 56, Jamal teaches a method form transmission, comprising: receiving data for transmission (column 10, lines 31-34); storing the data in a data buffer (column 10, lines 30-32); generating an access request message (column



11, lines 51-53); transmitting the access request message (column 11, lines 32-34); receiving one or more common grant channels from a base station (see Fig. 6); decoding an access grant comprising a common grant on one of the one or more common grant channels; receiving a busy signal from the base station (column 14, lines 33-36; the claimed common grant channels are shared channels which are inherent in the access grant); and transmitting a portion of data from the data buffer in response to a decoded access grant adapted in accordance with received busy signal (column 11, lines 32-34; column 11, lines 57-63).

Jamal differs from the claimed invention in that Jamal does not teach that the transmission rate is decreased in response to an assertion on the received busy signal. However, Kim from the same field of endeavor discloses that the transmission rate is decreased in response to an assertion on the received busy signal (column 7, lines 4-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kim into the system of Jamal in order to improve system performance.

Regarding claims 42, 43 and 44 Jamal teaches a method for transmission, comprising: receiving data for transmission (column 10, lines 31-34); storing the data in a data buffer (column 10, lines 30-32); generating an access request message (column 11, lines 51-53); transmitting the access request message (column 11, lines 32-34); receiving one or more common grant channels from a base station (see Fig. 6); decoding an access grant comprising a common grant on one of the one or more common grant channels; receiving a busy signal from the base station (column 14, lines

Art Unit: 2616

33-36; the claimed common grant channels are shared channels which are inherent in the access grant); and transmitting a portion of data from the data buffer in response to a decoded access grant adapted in accordance with received busy signal (column 11, lines 32-34; column 11, lines 57-63).

Jamal differs from the claimed invention in that Jamal does not teach that the transmission rate is increased in response to an assertion on the received busy signal. However, Chen from the same field of endeavor discloses that the transmission rate is increased in response to an assertion on the received busy signal (column 7, lines 4-15 ). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kim into the system of Jamal in order to improve system performance.

### ***Allowable Subject Matter***

3. Claims 12, 13, 14, 22-32, 34, 35, 36, 37, 38, 46, 48, 50 ,52, 2-8 are allowable.

The following is a statement of reasons for the indication of allowable subject matter: As to claims 12, the prior art of record does not teach the receiver further receives an ACK-and-continue command; the transmitter transmits an additional portion of data from the data buffer in response to a previously decoded access grant, responsive to the received busy signal. As to claim 13, the prior art of record does not teach wherein the transmitter further transmits a limited portion of the data in the data buffer autonomously, subsequent to a received ACK, responsive to the received busy

Art Unit: 2616

signal. As to claim 14, the prior art of record does not teach the receiver further receives a NAK, command; and the transmitter retransmits the portion of data from the data buffer previously transmitted in response to a previously decoded access grant, responsive to the received busy signal. As to claims 22-32, the prior art of record does not teach transmitting a busy signal when the measured utilization exceeds a pre-determined threshold. As to claim 35, the prior art of record does not teach transmitting a limited portion of the data in the data buffer autonomously, irrespective of whether an access grant has been received, responsive to the received busy signal. As to claim 36, the prior art of record does not teach receiving an ACK-and-continue command; and transmitting an additional portion of data from the data buffer in response to a previously decoded access grant, adapted to the received busy signal. As to claim 37, the prior art of record does not teach transmitting a limited portion of the data in the data buffer autonomously, subsequent to a received ACK, responsive to the received busy signal. As to claim 38, the prior art of record does not teach receiving a NAK command; and retransmitting the portion of data from the data buffer previously transmitted in response to a previously decoded access grant, responsive to the received busy signal. As to claims 46, 48 and 50, the prior art of record does not teach means for transmitting a busy signal when the measured utilization exceeds a pre-determined threshold.

***Response to Arguments***

Art Unit: 2616

4. Applicant's arguments with respect to claims 1-8, 10-32, 34-46, 48 and 50 have been considered but are moot in view of the new ground(s) of rejection.

### Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (571) 272-3183. The examiner can normally be reached on M-F from 8:30am to 6:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (571) 272-3179. The Fax number is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Electronic Business Center (EBC)** numbers at 866-217-9197 and 703-305-3028.

Alexander Boakye

Patent Examiner



7/23/07